

**REMARKS**

Entry of the foregoing and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.111 and in light of the remarks which follow, are respectfully requested.

By the above amendments, claim 1 has been amended to recite that the high refraction film has a refractive index of from 1.55 to 2.40. Support for this amendment can be found in the specification at least at page 9, lines 5-10. Claims 7, 9, 16, 17, 19, 21 and 23 have been amended for readability purposes. Claims 16 and 19 have been amended to recite that the inorganic fine particles have an average particle diameter of from 1 to 200 nm. Support for such amendment can be found in the instant specification at least at page 10, lines 7-10. Claim 18 has been amended to be in independent form. Support for such amendment can be found in the specification at least at page 6, lines 1-19, taken in connection with page 49, lines 16-19. Support for newly added dependent claims 33-41 can be found at least at the following portions of the present specification:

claim 33	page 6, lines 1-9 and page 49, lines 16-19;
claims 34 and 36	page 6, lines 1-9 and page 261, lines 15-16;
claim 35	page 6, lines 1-9 and page 11, lines 1-3;
claim 37	page 6, lines 1-19;
claim 38	page 6, lines 1-19 and page 11, lines 1-3; and
claims 39-41	page 7, lines 18-20.

Entry of the above amendments is proper at least because a Request for Continued

Examination is being filed herewith. See 37 C.F.R. §1.114.

In the Official Action, claims 1, 3, 4 and 6-32 stand rejected under 35 U.S.C. §103(a) as being obvious over European Patent Document No. 1 089 093 (*EP '093*) in view of U.S. Patent No. 2,992,122 (*Beck et al*). Withdrawal of this rejection is respectfully requested for at least the following reasons.

*EP '093* does not disclose or suggest each feature recited in independent claims 1, 16, 18, 19 and 33-38. For example, *EP '093* fails to disclose or suggest inorganic fine particles comprising titanium dioxide as a main component, said titanium dioxide containing cobalt, as recited in claim 1. Similarly, there is no disclosure or suggestion of inorganic fine particles comprising titanium dioxide as a main component, and said titanium dioxide contains cobalt, as recited in claims 16, 18, 19 and 33-38. Such deficiencies of *EP '093* have been acknowledged by the Patent Office at page 4 of the Official Action.

Concerning such deficiencies, the Patent Office has taken the position that "Co is an obvious, functionally equivalent metal compound to those disclosed by *EP '093*." Official Action at page 4. Applicants respectfully disagree. As discussed in Applicants' previous response, the experimental data set forth in the Declaration Under 37 C.F.R. §1.132 of Hiroyuki Yoneyama filed August 6, 2007 (hereinafter "Declaration"), shows the surprising and unexpected results attainable by aspects of the claimed invention. **Specifically, such experimental data shows that Co is not a mere functional equivalent of the elements disclosed by *EP '093*.** In this regard, referring to Table 1 of the Declaration, Co provided significantly improved light-resistance characteristics in comparison with Fe, Al and Zr, when such elements were used in conjunction with TiO<sub>2</sub>. Quite clearly, Co cannot properly be considered a mere functional equivalent of Fe, Al and Zr as alleged by the Patent Office.

The Patent Office has noted that "EP '093 teach a number of metals that may be incorporated into the titanium dioxide particles . . . aside from Fe, Al and Zr" (which were employed in the comparative experiments). Official Action at page 5. However, the disclosure of metals not used in the comparative examples does not permit the Patent Office to ignore the experimental data presented in the Declaration. Rather, Applicants note that *EP '093* discloses that Al and Zr (which were used in the comparative examples) are preferred

materials. Paragraph [0059]. Furthermore, while various "others elements" are listed at paragraph [0060], it is clear that *EP '093*'s emphasis is on the core and shell materials disclosed in paragraphs [0058] and [0059]. Moreover, as discussed above, the comparative examples included the use of Fe, which is set forth in the "other elements" list of *EP '093*. Thus, in view of the nature of the disclosures of *EP '093*, it is apparent that one of ordinary skill in the art would have recognized that the Fe, Al and Zr used in the comparative examples are representative of the materials disclosed by *EP '093*.

The Examiner has also noted that "Applicant has not provided any showing with respect to the light resistance characteristics of cobalt oxide alone." Official Action at page 5. Respectfully, Applicants submit that such a comparison is not necessary to show unexpected results. The Declaration shows that the use of **titanium dioxide** together with cobalt, can provide surprising and unexpected results in comparison with the use of **titanium dioxide** with Fe, Al and Zr. That is, the relevant examples all employ titanium dioxide. Simply put, a comparison between the use of titanium dioxide and cobalt, with the use of cobalt alone, is not necessary to show the surprising and unexpected nature of aspects of the claimed invention.

*Beck et al* fails to cure the above-described deficiencies of *EP '093*. One of ordinary skill in the art would not have been motivated to employ the cobalt oxide disclosed by *Beck et al* in the *EP '093* fine particles. The Examiner has alleged that *Beck et al* teaches that "cobalt oxide has improved characteristics over other metal oxides." Official Action at page 5. In this regard, *Beck et al* discloses that the use of cobalt oxide and titanium oxide as network forming oxides are "contributing factors in causing our glasses to exhibit a limited transmission characteristic in the indigo blue range." Col. 2, lines 46-58. Applicants note that the relatively large particle size of the *Beck et al* particles is necessary to attain the

limited transmission characteristic in the indigo blue range desired by *Beck et al.* However, whereas the examples of *Beck et al.* employ particles having an average diameter of 1.5 to 9 mils (38,000 nm to 228,000 nm), *EP '093* discloses inorganic fine particles having a particle sizes of 1-150 nm. *Beck et al.* at Table C; *EP '093* at paragraph [0067]. Quite clearly, there exists **an enormous particle size discrepancy** between the particles disclosed by *Beck et al.* and the *EP '093* fine particles, on the order of several magnitudes. In view of such enormous discrepancy, one of ordinary skill in the art would not have expected to achieve the same limited transmission characteristic desired by *Beck et al.*, by incorporating cobalt oxide in the *EP '093* fine particles. As noted above, the larger particle size of the *Beck et al.* particles is necessary to achieve such desired effect. As such, it is clear that one of ordinary skill in the art would not have been motivated to employ the cobalt oxide disclosed by *Beck et al.*, in the *EP '093* fine particles.

Furthermore, as discussed above, the Declaration shows the **surprising** and **unexpected** results attainable from employing aspects of the claimed invention. In view of such surprising and unexpected results, it is clear that the currently pending claims are non-obvious over *EP '093* and *Beck et al.* Accordingly, withdrawal of the §103(a) rejection is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: March 19, 2008

By:

A handwritten signature in black ink, appearing to read "Roger H. Lee", is written over a horizontal line.

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